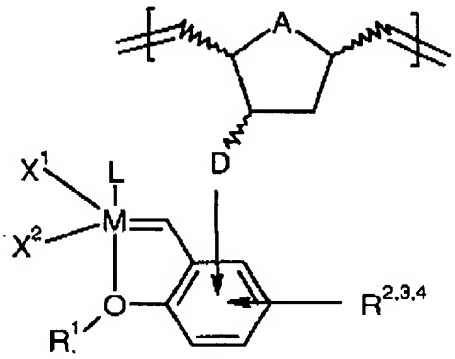
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Previously Presented) A polymeric transition metal catalyst comprising: a polymeric compound having a degree of polymerization numerical average value from 6 to 2000 and containing at least one transition metal catalyst comprising:

at least one structural unit of the formula (Ia):

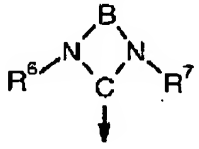


where;

M is a transition metal of the 8th transition group of the Periodic Table;

X^1 and X^2 are the same or different and are each chlorine, bromine or iodine;

L is an N-heterocyclic carbene ligand of the formula (II):



(II)

where the direction of the arrow is intended to represent the bond to M and where;

B is a 1,2-ethanediyl or 1,2-ethenediyl radical which is optionally mono- or disubstituted by C_1-C_4-alkyl, C_6-C_{15}-arylalkyl or C_5-C_{14}-aryl; and

R^6 and R^7 are each independently C_1-C_{20}-alkyl or C_5-C_{24}-aryl;

R^1 is cyclic, straight-chain or branched C_1-C_{20}-alkyl or C_5-C_{24}-aryl; and

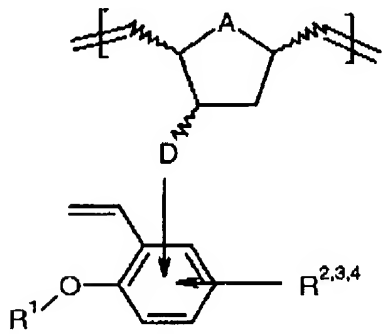
R^2, R^3 and R^4 are each independently hydrogen, C_1-C_{20}-alkyl, C_5-C_{24}-aryl, halogen, C_1-C_4-fluoroalkyl, C_1-C_4-alkoxy, C_5-C_{14}-aryloxy, (C_1-C_8-alkyl)OCO-, (C_1-C_8-alkyl)CO_2-, (C_5-C_{14}-aryl)OCO- or (C_5-C_{14}-aryl)CO_2-; and/or

in each case two radicals in an ortho-arrangement to one another from the group of R^2, R^3 and R^4 are part of a cyclic system which consists of a carbon framework having 5 to 22 carbon atoms, one or more carbon atoms of the cyclic system optionally being replaced by heteroatoms from the group of sulphur, oxygen or nitrogen, and the cyclic system also being optionally mono- or polysubstituted by radicals selected from the group of halogen, C_1-C_4-fluoroalkyl, (C_1-C_4-alkyl)OCO-, (C_1-C_8-alkyl)CO_2-, (C_6-C_{10}-aryl)OCO- or (C_5-C_{14}-aryl)CO_2-; and

A is oxygen, sulphur, sulphoxyl, sulphonyl or CR^8R^9 where R^8 and R^9 are each independently hydrogen or C_1-C_4-alkyl; and

D is C_1-C_8-alkylene, [(C_1-C_8-alkylene)-O-]$_n$ where n = 1 to 12, (C_1-C_8-alkylene)CO_2-, (C_1-C_8-alkylene)-OCO-(C_1-C_8-alkylene), (C_1-C_8-alkylene)CO_2-(C_1-C_8-alkylene), (C_1-C_8-alkylene)$CONR^{10}$-, (C_1-C_8-alkylene)$NR^{10}CO$-, (C_1-C_8-alkylene)$CONR^{10}$-(C_1-C_8-alkylene) or (C_1-C_8-alkylene)$NR^{10}CO$-(C_1-C_8-alkylene) where R^{10} is hydrogen or C_1-C_4-alkyl; and

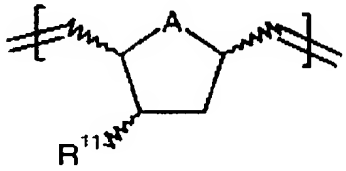
at least one structural unit of the formula (Ib):



(Ib)

where A, D, R^1, R^2, R^3 and R^4 each independently have the same definitions and fulfil the same conditions as specified under the formula (Ia); and, optionally,

at least one structural units of the formula (Ic):



(Ic)

where:

A has the same definition and fulfils the same conditions as specified under the formula (Ia) in Claim 1; and

R^{11} is C_1-C_8-alkyl, [(C_1-C_8-alkylene)-O-]$_n$-(C_1-C_8-alkyl) where n = 1 to 12, (C_1-C_8-alkylene)CO_2-(C_1-C_8-alkyl), (C_1-C_8-alkylene)-OCO-(C_1-C_8-alkyl), (C_1-C_8-alkylene)-OCO-(C_5-C_{14}-aryl), (C_1-C_8-alkylene)CO_2-(C_5-C_{14}-aryl), (C_1-C_8-alkylene)$CONR^{10}$-(C_1-C_8-alkyl), (C_1-C_8-alkylene)$NR^{10}CO$-(C_1-C_8-alkyl), (C_1-C_8-alkylene)-$CONR^{10}$-(C_5-C_{14}-aryl) or (C_1-C_8-alkylene)$NR^{10}CO$-(C_5-C_{14}-aryl) where R^{10} is hydrogen or C_1-C_4-alkyl.

2. (Cancelled)

3. (Previously Presented) The polymeric compound according to one or more of Claims 1 further comprising at least one structural unit derived from olefins suitable for ring-opening metathesis polymerization.

4. (Cancelled)

5. (Previously Presented) The polymeric compound according to Claim 1, wherein A, D, M, L, X1 and X2 and R1, R2, R3, R4 and R11 radicals present in the structural units of the formulae (Ia), (Ib) and (Ic) are identical.

6. (Previously Presented) The polymeric compound according to Claim 1, wherein the average proportion by weight of structural units of the formula (Ia) and (Ib) and (Ic) present is 80% or more.

7. (Previously Presented) The polymeric compound according to Claim 1, wherein the ratio of structural units of the formula (Ia) to structural units of the formula (Ib) is 1:2 to 1:500.

8. (Previously Presented) The polymeric compound according to Claim 1, wherein the ratio of structural units of the formula (Ia) to structural units of the formula (Ic) is 10:1 to 1:200.

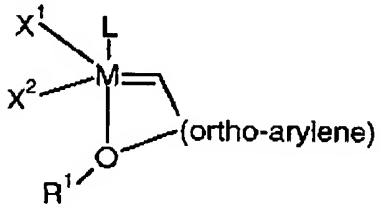
9. (Previously Presented) The polymeric compound according to Claim 1, wherein D in the structural units of the formulae (Ia) and (Ib) is bonded via the ortho-position to the olefin or the ylidene unit.

10. (Previously Presented) The polymeric compound according to Claim 1, wherein M in formula (Ia) is ruthenium or osmium.

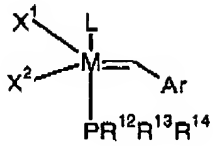
11. (Previously Presented) The polymeric compound according to Claim 1, wherein B in formula (II) is 1,2-ethanediyl or 1,2-ethenediyl.

12. (Previously Presented) The polymeric compound according to Claim 1, wherein R^6 and R^7 in formula (II) are identical and are primary C_5-C_{20}-alkyl radicals, wherein the carbon atom bonded to the nitrogen atom bears a tertiary alkyl radical, or secondary C_3-C_{20}-alkyl radicals, a tertiary C_4-C_{20}-alkyl radicals, or mono- or poly-substituted phenyl radicals wherein substitutions are in ortho-position, by C_1-C_4-alkyl radicals.

13. (Withdrawn) Process for preparing polymeric compounds, characterized in that compounds of the formula (IIIa) and/or (IIIb)



(IIIa)



(IIIb)

where

R^1, L, X^1 and X^2 each have the definition and areas of preference specified in Claim 1 under formula (Ia) and

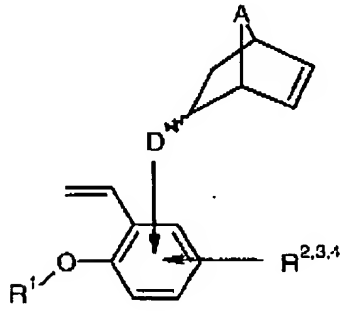
ortho-arylene is an ortho-phenylene or ortho-naphthylene radical, for example 1,2-naphthylene, and the radicals mentioned may also be substituted by one, two, three or four radicals per cycle which are selected from the group of C_1-C_4-alkyl, C_5-C_{14}-aryl and C_1-C_4-alkoxy and

Ar is C_5-C_{14}-aryl and

R^{12}, R^{13} and R^{14} are each independently C_1-C_8-alkyl or C_5-C_{14}-aryl

are reacted

- with at least one compound of the formula (IV)

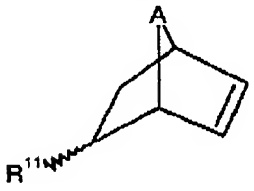


(IV)

where

R^1, R^2, R^3, R^4, A and D have the definition and areas of preference specified under formula (Ia) in Claim 1.

14. (Withdrawn) Process according to Claim 13, characterized in that the reaction is also effected with at least one compound of the formula (V),



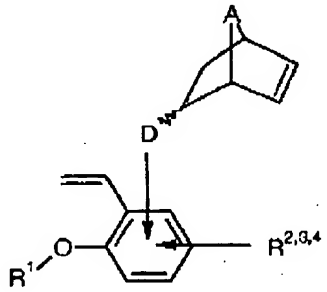
(V)

where

R^{11} and A each have the definition and areas of preference specified under formula (Ic) in Claim 2.

15. (Withdrawn) Process according to one or more of Claims 13 or 14, characterized in that the reaction is also effected with one or more further olefins which can be polymerized by ring-opening metathesis.

16. (Previously Presented) A polymeric transition metal catalyst precursor comprising a compound of formula (IV):



(IV)

where:

R^1, R^2, R^3, R^4, A and D are each as defined under formula (Ia) in Claim 1.

17. (Previously Presented) A polymeric transition metal catalyst precursor compound comprising: 7-Oxa-2-norbom-2-en-5-ylmethyl 2-isopropoxy-3-ethenylphenyl ether.

18. (Withdrawn) Use of polymeric compounds according to one or more of Claims 1 to 12 as catalysts.

19. (Withdrawn) Process for preparing olefins by catalytic olefin metathesis, characterized in that the catalysts used are polymeric compounds according to one or more of Claims 1 to 12.

20. (Withdrawn) Process according to Claim 19, characterized in that the catalysts are removed from the catalytic reaction mixtures and reused for the preparation of olefins by catalytic olefin metathesis.